

# Operator Control and Monitoring Devices

## Panels – 270 series

### SIMATIC TP 270

#### Overview



- Touch panel with extensive functional scope for demanding machine visualization applications
- Pixel graphics 5.7" or 10.4" STN Touch Screen (analog/resistive), color (256 colors)
- All interfaces on board, e.g. MPI, PROFIBUS DP, USB; Ethernet optional
- The SIMATIC TP 270 Touch Panels are innovative successors to the SIMATIC TP27 Touch Panels

#### Benefits

- Integral component of Totally Integrated Automation (TIA): Increases productivity, minimizes the engineering outlay, reduces the lifecycle costs
- Modular expansion possible with options such as:
  - WinCC flexible /Sm@rtAccess for communication between various SIMATIC HMI systems
  - WinCC flexible /Sm@rtService for remote maintenance and servicing of machines/plants via the Internet/intranet
- Reduces the service and start-up costs due to:
  - Backup/restore via USB, MPI, PROFIBUS DP, RS 232 (serial) and optionally via Ethernet (TCP/IP) or compact flash card (CF card)
  - Remote downloading/uploading of the configuration and firmware
  - Specific drivers can be downloaded
  - Long service life of the backlighting
- Graphics library is available complete with ready-to-use display objects
- Can be used worldwide:
  - 32 languages can be configured (including Asiatic and Cyrillic character sets)
  - Up to 5 languages are selectable online
- Standard hardware and software interfaces to increase flexibility:
  - CF card, used for recipe data sets and for backing up the configuration and system data
  - Integrated USB interface for "Hot plug-in/out" of I/O devices (printer, keyboard, mouse, barcode reader)
  - Standard Windows storage format (CSV) for archives and recipes for further processing using standard tools (e.g. MS Excel)
  - Optional Ethernet (TCP/IP) for centralized data management and project management; connection of PLC to SIMATIC S7 when configuring with WinCC flexible

#### Application

The SIMATIC TP 270 Touch Panels can be used in all applications in which operator control and monitoring of machines and installations is required on site – whether in production automation, process automation or building service automation. They are in use in an extensive range of sectors and applications.

Their operation without a hard disk or fan, real-time capability as well as short start-up times make demanding machine visualization tasks possible even under harsh industrial conditions.

#### Design

- 5.7" (TP 270 6") or 10.4" (TP 270 10") STN color display, 256 colors
- Resistive analog Touch
- Compact design with small installation depth
- Rugged plastic (TP 270 6") or aluminum die-cast housing (TP 270 10") with IP65/NEMA 4/NEMA 12 (front) or IP20 (rear of unit) degree of protection
- The front is resistant to various oils, greases and standard detergents
- High electromagnetic compatibility (EMC) and extreme vibration resistance
- Plug-type terminals for connection of a 24 V DC power supply
- Interfaces:
  - Serial RS 232 interface and RS 485/422 for process connections and for downloading the configuration (MPI and PROFIBUS DP up to 12 Mbit/s)
  - Serial RS 232 interface (printer, download/upload)
  - USB for mouse, keyboard, printer and downloading/uploading configurations
  - Optional Ethernet (TCP/IP) using network card for exchanging data with a higher-level PC, connecting a network printer and downloading/uploading configurations; connection of PLC to SIMATIC S7 when configuring with WinCC flexible
- Slot for compact flash card

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SIMATIC TP 270

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### Function

- Displaying and modifying process parameters
- Process display:
  - **TP 270 6"**:  
QVGA resolution (320 x 240 pixels),
  - **TP 270 10"**:  
VGA resolution (640 x 480 pixels)  
with 256 colors for display elements
  - Vector graphics (various line-drawn and solid objects)
  - Dynamic positioning and dynamic showing/hiding of objects
  - Pixel graphics displays, curves and bar displays
  - Presentation of up to 8 curves in a curve field;  
curve graphics with scroll and zoom functions for accessing historical values and for flexible selection of the displayed time frame;  
cross-hair for reading off current values and display in a table
  - Comprehensive image libraries (SIMATIC HMI Symbol Library)
  - Graphics objects: Slider, gauge, clock
  - Cyclic function processing using timers
- Multiplex function for variables
- Message system
  - administration of status, fault and system messages
  - Status and fault messages with message history
  - Preconfigured message display, message window and message line
- Archiving of messages and process values (on CF Card, optionally over Ethernet)
  - Different archive types: short-term archive and sequence archive
  - Storage of archive data in standard Windows format (CSV)
  - Online evaluation of process value archives through curves
  - External evaluation using standard tools (MS Excel and MS Access) is possible
- Message log and shift log
- Print functions (see "recommended printers")
- Language selection
  - 5 online languages, 32 configuration languages incl. Asiatic and Cyrillic character sets
- Password protection with 10 levels
- Recipe management
  - With additional data storage (on CF Card)
  - Online/offline processing at the panel
  - Storage of recipe data in standard Windows format (CSV)
  - External processing using standard tools MS Excel and MS Access is possible
- PG functions STATUS/CONTROL VAR in combination with SIMATIC S5 and SIMATIC S7
- Display selection from the PLC
  - supports operator prompting from the PLC
- Visual Basic Script, flexibility through the implementation of new functions including linking to ProTool variables (comparison operations, loops, etc.)
- Help texts
  - for process diagrams, messages and variables
- Mathematical functions
- Limit value monitoring
  - for reliable process control of inputs and outputs
- Permanent window;
  - permanent display area for the output of information that is not specific to the particular display (e.g. important process variables, date and time)
- Simple maintenance and configuration through
  - Backup and restoring the configuration, operating system, data records and firmware on the optional CF Card (Compact Flash Card) or optionally over Ethernet
  - Backup and restoring the configuration, operating system, data records and firmware on a PC using ProSave
  - Configuration download/upload over USB/MPI/PROFIBUS DP/RS 232/Ethernet (optional)/modem and CF Card (optional)
  - Automatic transfer identification
  - Individual contrast settings
  - Configuration simulation directly on the configuration computer
- Import/export of all texts including messages in CSV format for translation using standard word processing programs

### Additional functions when configuring with WinCC flexible

- Project-specific picture blocks that can be modified centrally
- Message system
  - Bit messages and analog messages (limit value messages) as well as the Alarm S message frame procedure for SIMATIC S7 and SIMOTION
  - Freely-definable message classes (e.g. status/fault messages) for definition of acknowledgment response and display of message events
- Language selection:
  - Language-dependent texts and graphics
- Permanent window expanded by template concept;
  - generation of screen templates
- User administration (security)
  - User-oriented access protection according to requirements of specific sectors
  - Authentication by means of user ID and password
  - Privileges specific to user groups
- Visual Basic Runtime object model
- Service functions
  - (optionally with "WinCC flexible/Sm@rtService")
  - E-mail generation
  - Remote operation of the SIMATIC HMI system based on Internet explorer
  - Web server with status HTML pages and control functions
- Client/server functions
  - (optionally with "WinCC flexible /Sm@rtAccess")
  - Remote operation and monitoring of other SIMATIC HMI systems
  - Plant-wide scanning of information and archiving of process data

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### SIMATIC TP 270

#### Function (continued)

##### Configuration

Configuring is performed using the configuring software SIMATIC ProTool or SIMATIC ProTool/Pro Configuration (see HMI software/configuring software or visualization software) or using the engineering software SIMATIC WinCC flexible Standard or Advanced (see HMI software/SIMATIC WinCC flexible engineering software).

Projects generated using ProTool can be imported into WinCC flexible.

##### Applications/options

##### When configuring with ProTool

- SIMATIC ProAgent/MP;  
fast, localized fault diagnosis in plants and machines for SIMATIC S7 and SIMATIC HMI (see HMI software/process diagnostics software SIMATIC ProAgent)

##### When configuring with WinCC flexible

- WinCC flexible /ProAgent;  
fast, localized fault diagnosis in plants and machines for SIMATIC S7 and SIMATIC HMI (see HMI software/process diagnostics software SIMATIC ProAgent)
- WinCC flexible /Sm@rtAccess;  
Remote control and monitoring as well as communication between different SIMATIC HMI systems (see WinCC flexible RT options)
- WinCC flexible /Sm@rtService;  
Remote monitoring and servicing of machines/plants over the Internet/intranet (see WinCC flexible RT options)

#### Integration

The TP 270 can be connected to:

- SIMATIC S7-200/-300/-400
- SIMATIC WinAC Software/Slot PLC
- SIMATIC S5
- SIMATIC 505
- SINUMERIK
- SIMOTION
- Non-Siemens controllers
  - Allen Bradley
  - Mitsubishi
  - Telemecanique <sup>1)</sup>
  - LG GLOFA GM
  - Modicon
  - GE-Fanuc
  - Omron
- Over Ethernet (TCP/IP) to higher-level PC and network printer (optionally over NE2000-compatible network card)

##### Additionally when configuring with WinCC flexible

- Ethernet communication with SIMATIC S7 (optionally over NE2000-compatible network card)
- Multi-protocol capability
- HTTP communication to other SIMATIC HMI systems (optionally with the "WinCC flexible /Sm@rtAccess" option)
- SINUMERIK  
(optionally with "SINUMERIK HMI copy license WinCC flexible CE"; the "SINUMERIK HMI engineering package WinCC flexible" is additionally necessary for configuration; for further information, see Catalog NC 60)

1) Cannot be connected in conjunction with WinCC flexible



**Note:**  
For further information, see "System interfaces".

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## SIMATIC TP 270

## Technical specifications

	<b>SIMATIC TP 270 5,7" Color STN Display</b>	<b>SIMATIC TP 270 10,4" Color STN Display</b>
<b>Display</b>		
• Display type	STN liquid crystal display (LCD)	STN liquid crystal display (LCD)
• Size	5.7"	10.4"
• Resolution (W x H in pixels)	320 x 240	640 x 480
• Colors	256 colors	256 colors
• MTBF of background lighting (at 25 °C)	approx. 40,000 hours	approx. 60,000 hours
<b>Operating mode</b>		
• Control elements	Touch screen	Touch screen
• Operating options	Touch	Touch
• Touch screen	Analog, resistive	Analog, resistive
• Numeric/alphanumeric input	Yes/Yes	Yes/Yes
• External mouse/keyboard/barcode reader	USB/USB/USB	USB/USB/USB
<b>Processor/HW</b>	RISC 32 bits, 180 MHz	RISC 32 bits, 180 MHz
<b>Operating systems</b>	Windows CE	Windows CE
<b>Memory</b>		
• Type	Flash/RAM	Flash/RAM
• Usable memory for project data	2028 KB user memory/without additional memory for options	2028 KB user memory/without additional memory for options
<b>Interfaces (some only as options)</b>		
• Interfaces	2 x RS232, 1 x RS422, 1 x RS485 max. 12 Mbit/s	2 x RS232, 1 x RS422, 1 x RS485 max. 12 Mbit/s
• CF card slot	1 x CF card slot	1 x CF card slot
• USB (universal serial bus)	1 x USB	1 x USB
<b>Supply voltage</b>		
• Supply voltage	24 V DC	24 V DC
• Permissible range	+18 to +30 V DC	+18 to +30 V DC
• Rated current	0.6 A	0.6 A
• Output	15 W	15 W
• UPS can be connected (serial)	Yes	Yes
• Backup battery	Optional 3.6 V	Optional 3.6 V
<b>Clock</b>	Hardware clock, battery-backed and synchronized	Hardware clock, battery-backed and synchronized
<b>Degree of protection</b>		
• Front	IP65, NEMA 4, NEMA 4x, NEMA 12; (when mounted)	IP65, NEMA 4, NEMA 4x, NEMA 12; (when mounted)
• Rear	IP20	IP20
<b>Certification (some only as options)</b>	CE, GL, ABS, DNV, LRS, FM Class I Div. 2, UL, cULus, EX zone 2/22, C-TICK	CE, GL, ABS, DNV, LRS, FM Class I Div. 2, UL, cULus, EX zone 2/22, C-TICK

	<b>SIMATIC TP 270 5,7" Color STN Display</b>	<b>SIMATIC TP 270 10,4" Color STN Display</b>
<b>Mechanical components/ dimensions</b>		
• Front panel W x H (mm)	212 x 156	335 x 275
• Mounting cutout/depth W x H x D (mm)	198 x 142/ 59 mm depth of unit	310 x 248/ 59 mm depth of unit
• Weight	1 kg	4.5 kg
<b>Ambient conditions</b>		
• Max. relative humidity (in %)	85%	85%
• Mounting position	Vertical	Vertical
- Max. permissible angle of inclination without external fan	+/- 35°	+/- 35°
• Temperature		
- Operation (vertical installation)	0 to +50 °C	0 to +50 °C
- Operation (max. angle of inclination)	0 to +35 °C	0 to +40 °C
- Transportation and storage	-20 to +60 °C	-20 to +60 °C
<b>Expansions for operator-process communication (may only be an option)</b>		
• DP direct keys (buttons as input peripherals)	4 bytes or coded	5 bytes or coded
<b>Peripherals/applications/options</b>		
• I/O	Printer, bar-code reader	Printer, bar-code reader
• Applications/options (with ProTool)	ProAgent	ProAgent
<b>Configuring</b>		
• Configuration tool	ProTool	ProTool
• Configuration tool	WinCC flexible	WinCC flexible
<b>Functionality (with WinCC flexible)</b>		
• Scheduler	Yes	Yes
• Help system	Yes	Yes
• Status/Control	with SIMATIC S5/S7	with SIMATIC S5/S7
<b>Protocols</b>		
• Interface to control (may only be an option)	S5, S7-200, S7-300/400, 505Win AC, PC (TCP/IP), SINUMERIK, SIMOTION, Allen Bradley (DF1), Allen Bradley (DF485), Mitsubishi (FX), Telemecanique (ADJUST), OMRON (LINK/Multi-link), Modicon (Modbus) and other non-Siemens drivers	S5, S7-200, S7-300/400, 505Win AC, PC (TCP/IP), SINUMERIK, SIMOTION, Allen Bradley (DF1), Allen Bradley (DF485), Mitsubishi (FX), Telemecanique (ADJUST), OMRON (LINK/Multi-link), Modicon (Modbus) and other non-Siemens drivers

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### SIMATIC TP 270

#### Technical specifications (continued)

	<b>SIMATIC TP 270 5,7" Color STN Display</b>	<b>SIMATIC TP 270 10,4" Color STN Display</b>
<b>Functionality (with WinCC flexible) (continued)</b>		
<b>Signaling system</b>		
• Number of messages	4000	4000
• Discrete alarms	Yes	Yes
• Analog messages	Yes	Yes
• Message length (in characters)	70	70
• Number of process values per message	8	8
• Acknowledgement groups	99	99
• Message buffer	Ring buffer, 512 entries each	Ring buffer, 512 entries each
<b>Recipes</b>		
• Recipes	300	300
• Data records per recipe	500	500
• Entries/data record	1000	1000
• Recipe memory	64 KB integrated Flash, expandable	64 KB integrated Flash, expandable
<b>Process images</b>	300	300
<b>Picture elements</b>		
• Text objects	10,000 text elements	10,000 text elements
• Fields per screen	200	200
• Variables/screen	200	200
• Graphics objects	Bitmaps, icons, vector graphics	Bitmaps, icons, vector graphics
• Dynamic objects	Diagrams, hidden buttons	Diagrams, hidden buttons
<b>Variables</b>	2048	2048
<b>Archiving</b>		
• Number of archives per project	20	20
• Number of process tags per archive	0	0
• Number of entries per archive	10,000	10,000
• Archive types	Sequence archive, short-term archive, alarm log, process value archive	Sequence archive, short-term archive, alarm log, process value archive
• Memory location	CF card, Ethernet	CF card, Ethernet
• Data storage format	CSV file, can be read, e.g., in MS Excel, MS Access	CSV file, can be read, e.g., in MS Excel, MS Access
• External evaluation	Can be read, e.g., in MS Excel, MS Access, etc.	Can be read, e.g., in MS Excel, MS Access, etc.
• Size of archive	Dependent on the memory space available on the external card/stick or spare hard disk memory via the network drive	Dependent on the memory space available on the external card/stick or spare hard disk memory via the network drive
• Online evaluation	Using trend curves	Using trend curves

	<b>SIMATIC TP 270 5,7" Color STN Display</b>	<b>SIMATIC TP 270 10,4" Color STN Display</b>
<b>Functionality (with WinCC flexible) (continued)</b>		
<b>Security</b>		
• Number of user groups	10	10
• Exportable passwords	Yes	Yes
<b>Visual Basic Script</b>	not possible	not possible
<b>Logging/printer driver</b>		
• Printing/logging	Messages, report/log, color print	Messages, report/log, color print
• Printer driver	ESC/P2, PCL3/PCL6	ESC/P2, PCL3/PCL6
<b>Fonts</b>		
• Keyboard fonts	US English	US English
<b>Languages</b>		
• Online languages	5	5
• Project languages:	D, GB, F, I, E, CHN "traditional", CHN "simplified", DK, FIN, GR, J, KP/ROK, NL, N, PL, P, RUS, S, CZ/SK, TR, H	D, GB, F, I, E, CHN "traditional", CHN "simplified", DK, FIN, GR, J, KP/ROK, NL, N, PL, P, RUS, S, CZ/SK, TR, H
• Character sets	Tahoma, ideographic languages, 2 further character sets can be loaded, all freely scalable	Tahoma, ideographic languages, 2 further character sets can be loaded, all freely scalable
<b>Data carrier support (may only be an option)</b>		
• CF card	Yes	Yes
• Applications/options (with WinCC flexible)	ProAgent	ProAgent
<b>Transfer under ProTool (upload/download)</b>		
• Transfer of the configuration	MPI/PROFIBUS DP, serial, USB, Ethernet (automatic transfer recognition)	MPI/PROFIBUS DP, serial, USB, Ethernet (automatic transfer recognition)

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## SIMATIC TP 270

## Technical specifications (continued)

	SIMATIC TP 270 5,7" Color STN Display	SIMATIC TP 270 10,4" Color STN Display
<b>Functionality (under ProTool)</b>		
• Timer	Yes	Yes
• Password protection (number of levels)	9	9
• Help system	Yes	Yes
• PG functions (STATUS/CONTROL)	with SIMATIC S5/S7	with SIMATIC S5/S7
• PG function (status/control)	Yes	Yes
<b>Protocols</b>		
• Interface to PLC (may only be an option)	S5, S7-200, S7-300/400, 505Win AC, SINUMERIK, SIMOTION, Allen Bradley (DF1), Allen Bradley (DF485), Mitsubishi (FX), Telemecanique (ADJUST), OMRON (LINK/Multi-link), Modicon (Modbus) and other non-Siemens drivers	S5, S7-200, S7-300/400, 505Win AC, SINUMERIK, SIMOTION, Allen Bradley (DF1), Allen Bradley (DF485), Mitsubishi (FX), Telemecanique (ADJUST), OMRON (LINK/Multi-link), Modicon (Modbus) and other non-Siemens drivers
<b>Signaling system</b>		
• Status messages	2000	2000
• Alarm messages	2000	2000
• System messages	Yes	Yes
• Message length (lines x characters)	1 x 70	1 x 70
• Number of process values in messages	8	8
• Message buffer	Ring buffer, 512 entries each	Ring buffer, 512 entries each
<b>Recipes</b>		
• Recipes	300	300
• Data records per recipe	500	500
• Entries/data record	1000	1000
• Recipe memory	64 KB integrated Flash, expandable	64 KB integrated Flash, expandable
<b>Process images</b>	300	300
<b>Picture elements</b>		
• Text objects	10,000 text elements	10,000 text elements
• Fields per screen	200	200
• Variables per screen	200	200
• Graphics objects	Bitmaps, icons, vector graphics	Bitmaps, icons, vector graphics
• Dynamic objects	Diagrams, bar graphs, slides, analog displays, hidden buttons	Diagrams, bar graphs, slides, analog displays, hidden buttons
<b>Variables</b>	2048	2048

	SIMATIC TP 270 5,7" Color STN Display	SIMATIC TP 270 10,4" Color STN Display
<b>Functionality (under ProTool) (continued)</b>		
<b>Archiving</b>		
• Number of archives per project	20	20
• Number of process tags per archive	20	20
• Number of entries per archive	500,000	500,000
• Archive types	Short-term archive, sequence archive, message archive, process-value archive	Short-term archive, sequence archive, message archive, process-value archive
• Memory location	Number of entries per archive, sequence archive	Number of entries per archive, sequence archive
• Data storage format	CSV file, can be read, e.g., in MS Excel, MS Access	CSV file, can be read, e.g., in MS Excel, MS Access
• External evaluation	Can be read, e.g., in MS Excel, MS Access, etc.	Can be read, e.g., in MS Excel, MS Access, etc.
• Size of archive	Dependent on the memory space available on the external card/stick or spare hard disk memory via the network drive	Dependent on the memory space available on the external card/stick or spare hard disk memory via the network drive
• Online evaluation	Using trend curves	Using trend curves
<b>Visual Basic script</b>	Number = 50/ number of lines per script = 20	Number = 50/ number of lines per script = 20
<b>Logging/printer driver</b>		
• Print functions	Messages, shift log, color print, hardcopy	Messages, shift log, color print, hardcopy
• Drivers	ESC/P2, PCL3/PCL6	ESC/P2, PCL3/PCL6
<b>Fonts</b>		
• Language (keyboard fonts)	US English	US English
<b>Languages</b>		
• Online languages	5	5
• Project languages	D, GB, F, I, E, CHN "traditional", CHN "simplified", DK, FIN, GR, J, KP/ROK, NL, N, PL, P, RUS, S, CZ/SK, TR, H	D, GB, F, I, E, CHN "traditional", CHN "simplified", DK, FIN, GR, J, KP/ROK, NL, N, PL, P, RUS, S, CZ/SK, TR, H
• Character set	Tahoma, Arial, Courier New, ideographic languages, 2 further character sets can be loaded, all freely scalable	Tahoma, Arial, Courier New, ideographic languages, 2 further character sets can be loaded, all freely scalable
<b>Data carrier support</b>		
• CF card	Yes	Yes



# Operator Control and Monitoring Devices

## Panels – 270 series

### SIMATIC TP 270

#### Ordering data

##### SIMATIC TP 270

Touch Panel with

- 5.7" color STN display
- 10.4" color STN display incl. mounting accessories

B

6AV6 545-0CA10-0AX0

B

6AV6 545-0CC10-0AX0

#### Configuring

with SIMATIC ProTool and ProTool/Pro

See Section 4

with SIMATIC WinCC flexible

See Section 4

#### Configuration set

D

6AV6 622-0BA01-0AA0

Consisting of:

- WinCC flexible Standard engineering software
- SIMATIC HMI Manual Collection (CD), 5 languages (English, French, German, Italian, Spanish)
- Configuration cable USB master-master between PG/PC and panel
- MPI cable, 5 m

#### Applications/options

##### When configuring with ProTool

- SIMATIC ProAgent/MP

See Section 4

##### When configuring with WinCC flexible

- WinCC flexible /ProAgent
- WinCC flexible /Sm@rtAccess
- WinCC flexible /Sm@rtService

See Section 4

See Section 4

See Section 4

#### Order No.

#### Documentation (to be ordered separately)

##### Operating Instructions TP 270/OP 270 and MP 270B (WinCC flexible)

- German
- English
- French
- Italian
- Spanish

6AV6 691-1DD01-0AA0

6AV6 691-1DD01-0AB0

6AV6 691-1DD01-0AC0

6AV6 691-1DD01-0AD0

6AV6 691-1DD01-0AE0

##### User Manual WinCC flexible Compact/Standard/Advanced

- German
- English
- French
- Italian
- Spanish

6AV6 691-1AB01-0AA0

6AV6 691-1AB01-0AB0

6AV6 691-1AB01-0AC0

6AV6 691-1AB01-0AD0

6AV6 691-1AB01-0AE0

##### User Manual WinCC flexible Communication

- German
- English

6AV6 691-1CA01-0AA0

6AV6 691-1CA01-0AB0

##### TP/OP 270 and MP 270B (ProTool) Manual

- German
- English
- French
- Italian
- Spanish

6AV6 591-1DC20-0AA0

6AV6 591-1DC20-0AB0

6AV6 591-1DC20-0AC0

6AV6 591-1DC20-0AD0

6AV6 591-1DC20-0AE0

##### ProTool User Manual for configuring Windows-based systems

- German
- English
- French
- Italian
- Spanish

6AV6 594-1MA06-1AA0

6AV6 594-1MA06-1AB0

6AV6 594-1MA06-1AC0

6AV6 594-1MA06-1AD0

6AV6 594-1MA06-1AE0

B) Subject to export regulations AL: N and ECCN: 5D002ENC3

D) Subject to export regulations AL: N and ECCN: 5D992B1

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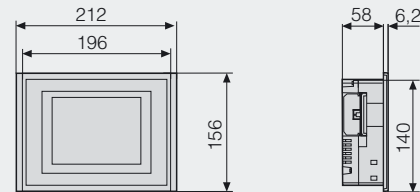
Ordering data	Order No.
<b>Documentation (to be ordered separately)</b> (continued)	
<b>User Manual Communication for Windows-Based Systems (ProTool)</b>	
• German	<b>6AV6 596-1MA06-0AA0</b>
• English	<b>6AV6 596-1MA06-0AB0</b>
• French	<b>6AV6 596-1MA06-0AC0</b>
• Italian	<b>6AV6 596-1MA06-0AD0</b>
• Spanish	<b>6AV6 596-1MA06-0AE0</b>
<b>SIMATIC HMI Manual Collection</b>	<b>6AV6 691-1SA01-0AX0</b>
Electronic documentation, on CD-ROM	
5 languages (English, French, German, Italian and Spanish); contains: all currently available user manuals, manuals and communication manuals for SIMATIC HMI	
<b>Accessories</b>	
<b>CF cards</b>	
CF card, 128 MB	<b>6AV6 574-2AC00-2AA0</b>
<b>Backup battery</b>	<b>W79084-E1001-B2</b>
Lithium battery, DC 3.6 V; 1.7 Ah for TD17, OP17, OP25, OP27, OP 270, OP35, OP37, TP27, TP 270, TP37, MP 270, MP 270B, MP 370	
<b>Accessories for supplementary ordering</b>	
<b>Cover foil</b>	
to protect the touch front against fouling/scratching (set of 10)	
• for TP 270 6"	<b>6AV6 574-1AD00-4DX0</b>
• for TP 270 10"	<b>6AV6 574-1AD00-4CX0</b>
<b>Service pack for TP 270 6"</b>	<b>6AV6 574-1AA00-4AX0</b>
Consisting of:	
• Installation sealing	
• 2 sets of labeling strips (for OPs)	
• 7 tensioning clamps	
• Plug-in terminal block (twin block)	
<b>Service pack for TP 270 10"</b>	<b>6AV6 574-1AA00-2CX0</b>
• Installation sealing	
• 2 sets of labeling strips (for OPs)	
• 10 tensioning clamps	
• Plug-in terminal block (twin block)	
• Machinist's wrench	
<b>Bus connector RS 485 with axial cable outlet (180°)</b>	<b>6GK1 500-0EA02</b>
<b>TTY-RS 232 converter</b>	<b>6ES5 734-1BD20</b>
for connection with S5 CPUs, length 3.2 m; Canon 15-pin – 25-pin	
<b>RS 232 cable (5 m)</b>	<b>6ES7 901-1BF00-0XA0</b>
<b>System interfaces</b>	See page 2/169
<b>Connecting cables</b>	See page 2/180

A) Subject to export regulations AL: N and ECCN: EAR99H

C) Subject to export regulations AL: N and ECCN: EAR99S

### Dimension drawings

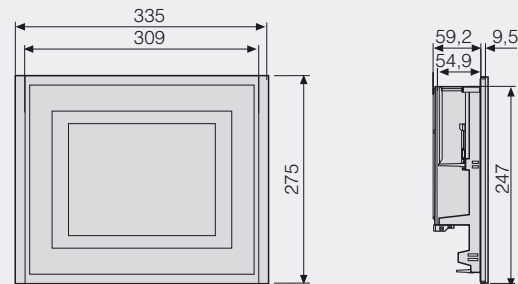
Dimensions in mm



Panel cutout (W x H) in mm: 198 x 142

TP 270 6"

Dimensions in mm



Panel cutout (W x H) in mm: 310 x 248

TP 270 10"

### More information

For further information, visit our website at

<http://www.siemens.com/panels>

#### Note

Do you need a specific modification or option for the products described here? Then look up "Customized products", where you will find information about additional sector-specific products that can be ordered as well as about options for customer-specific modification and adaptation.

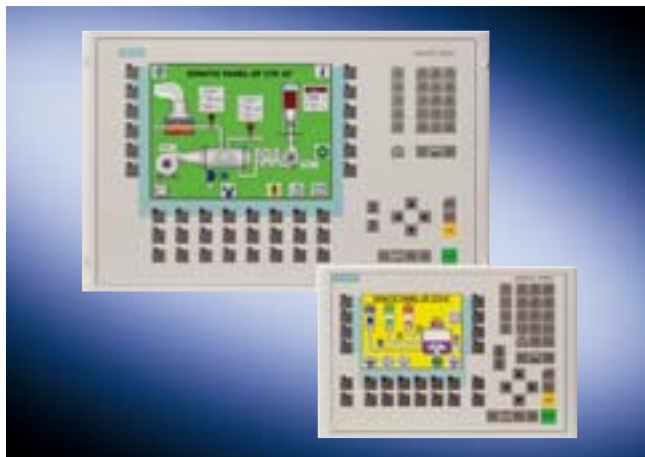


# Operator Control and Monitoring Devices

## Panels – 270 series

### SIMATIC OP 270

#### Overview



- Operator panel with comprehensive functions for demanding machine visualization tasks
- Pixel graphics 5.7" or 10.4" STN display, color (256 colors)
- **OP 270 6":**  
36 system keys, 24 freely-configurable and freely-inscribable function keys (18 with LEDs)
- **OP 270 10":**  
38 system keys, 36 freely-configurable and freely-inscribable function keys (28 with LEDs)
- All interfaces on board, e.g. MPI, PROFIBUS DP, USB; Ethernet optional
- SIMATIC OP 270 Operator Panels are the innovative successors of the SIMATIC OP27 Operator Panels

#### Benefits

- Integral component of Totally Integrated Automation (TIA):  
Increases productivity, minimizes the engineering outlay, reduces the lifecycle costs
- Modular expansion possible with options such as:
  - WinCC flexible /Sm@rtAccess for communication between various SIMATIC HMI systems
  - WinCC flexible /Sm@rtService for remote maintenance and servicing of machines/plants via the Internet/intranet
- Reduces the service and start-up costs due to:
  - Backup/restore via USB, MPI, PROFIBUS DP, RS 232 (serial) and optionally via Ethernet (TCP/IP) or compact flash card (CF card)
  - Remote downloading/uploading of the configuration and firmware
  - Specific drivers can be downloaded
  - Long service life of the backlighting
- Graphics library complete with ready-to-use display objects
- Can be used worldwide:
  - 32 languages can be configured (including Asiatic and Cyrillic character sets)
  - Up to 5 languages are selectable online
- Standard hardware and software interfaces to increase flexibility:
  - CF card, used for recipe data sets and for backing up the configuration and system data
  - Integrated USB interface for "Hot plug-in/out" of I/O devices (printer, keyboard, mouse, barcode reader)
  - Standard Windows storage format (CSV) for archives and recipes for further processing using standard tools (e.g. MS Excel)
  - Optional Ethernet (TCP/IP) for centralized data management and project management; connection of PLC to SIMATIC S7 when configuring with WinCC flexible

#### Application

The OP 270 Operator Panels can be used in all applications in which operator control and monitoring of machines and installations is required on site – whether in production automation, process automation or building services automation. They are in use in an extensive range of sectors and applications.

Their operation without a hard disk or fan, real-time capability as well as short start-up times satisfy demanding machine visualization tasks even under harsh industrial conditions.

#### Design

- 5.7" (OP 270 6") or 10.4" (OP 270 10") STN color display, 256 colors
- Membrane keyboard:
  - **OP 270 6":**  
36 system keys, 24 freely-configurable and freely-inscribable function keys (18 with LEDs)
  - **OP 270 10":**  
38 system keys, 36 freely-configurable and freely-inscribable function keys (28 with LEDs)
- Compact design with small installation depth
- Rugged plastic (OP 270 6") or aluminum die-cast housing (OP 270 10") with IP65/NEMA 4/NEMA 12 (front) or IP20 (rear of unit) degree of protection
- The front is resistant to various oils, greases and standard detergents
- High electromagnetic compatibility (EMC) and extreme vibration resistance
- Plug-type terminals for connection of a 24 V DC power supply
- Interfaces:
  - Serial RS 232 interface and RS 485/422 for process connections and for downloading the configuration (MPI and PROFIBUS DP up to 12 Mbit/s)
  - Serial RS 232 interface (printer, download/upload)
  - USB for mouse, keyboard, printer and downloading/uploading configurations
  - Optional Ethernet (TCP/IP) using network card for exchanging data with a higher-level PC, connecting a network printer and downloading/uploading configurations; connection of PLC to SIMATIC S7 when configuring with WinCC flexible
- Slot for compact flash card

# Operator Control and Monitoring Devices

## Panels – 270 series

SIMATIC OP 270

### Function

- Displaying and modifying process parameters
  - Function keys  
for direct triggering of functions and actions. Up to 16 functions can be configured simultaneously on function keys.  
The function keys can be used directly as PROFIBUS DP input peripherals.
  - Process display:
    - **OP 270 6"**:  
QVGA resolution (320 x 240 pixels),
    - **OP 270 10"**:  
VGA resolution (640 x 480 pixels)  
with 256 colors for display elements
    - Vector graphics (various line-drawn and solid objects)
    - Dynamic positioning and dynamic showing/hiding of objects
    - Pixel graphics displays, curves and bar displays
    - Presentation of up to 8 curves in a curve field;  
Curve display with scroll and zoom functions for access to the history and for flexible selection of the period for presentation; read-off line for determining the actual values and display in a table
    - Comprehensive image libraries (SIMATIC HMI Symbol Library)
    - Graphics objects: Slider, gauge, clock
    - Cyclic function processing using timers
  - Multiplex function for variables
  - Message system
    - administration of status, fault and system messages
    - Status and fault messages with message history
    - Preconfigured message display, message window and message line
  - Archiving of messages and process values  
(on CF Card, optionally over Ethernet)
    - Different archive types: short-term archive and sequence archive
    - Storage of archive data in standard Windows format (CSV)
    - Online evaluation of process value archives through curves
    - External evaluation using standard tools (MS Excel and MS Access) is possible
  - Message log and shift log
  - Print functions (see "recommended printers")
  - Language selection  
5 online languages, 32 configuration languages incl. Asiatic and Cyrillic character sets
  - Password protection with 10 levels
  - Recipe management
    - With additional data storage (on CF Card)
    - Online/offline processing at the panel
    - Storage of recipe data in standard Windows format (CSV)
    - External processing using standard tools MS Excel and MS Access is possible
  - PG functions STATUS/CONTROL VAR in combination with SIMATIC S5 and SIMATIC S7
  - Display selection from the PLC  
supports operator prompting from the PLC
  - Visual Basic Script, flexibility through the implementation of new functions including linking to ProTool variables (comparison operations, loops, etc.)
  - Help texts  
for process diagrams, messages and variables
  - Mathematical functions
  - Limit value monitoring  
for reliable process control of inputs and outputs
  - Permanent window  
permanent display area for the output of information that is not specific to the particular display (e.g. important process variables, date and time)
  - Simple maintenance and configuration through
    - Backup and restoring the configuration, operating system, data records and firmware on the optional CF Card (Compact Flash Card) or optionally over Ethernet
    - Backup and restoring the configuration, operating system, data records and firmware on a PC using ProSave
    - Configuration download/upload over USB/MPI/PROFIBUS DP/RS 232/Ethernet (optional)/modem and CF Card (optional)
    - Automatic transfer identification
    - Individual contrast settings
    - Configuration simulation directly on the configuration computer
  - Import/export of all texts including messages in CSV format for translation using standard word processing programs
- Additional functions when configuring with WinCC flexible**
- Project-specific picture blocks that can be modified centrally
  - Message system
    - Bit messages and analog messages (limit value messages) as well as the Alarm S message frame procedure for SIMATIC S7 and SIMOTION
    - Freely-definable message classes (e.g. status/fault messages) for definition of acknowledgment response and display of message events
  - Language selection:
    - Language-dependent texts and graphics
  - Permanent window expanded by template concept;
    - generation of screen templates
  - User administration (security)
    - User-oriented access protection according to requirements of specific sectors
    - Authentication by means of user ID and password
    - Privileges specific to user groups
  - Visual Basic Runtime object model
  - Service functions  
(optionally with "WinCC flexible/Sm@rtService")
    - E-mail generation
    - Remote operation of the SIMATIC HMI system based on Internet explorer
    - Web server with status HTML pages and control functions
  - Client/server functions  
(optionally with "WinCC flexible /Sm@rtAccess")
    - Remote operation and monitoring of other SIMATIC HMI systems
    - Plant-wide scanning of information and archiving of process data

# Operator Control and Monitoring Devices

## Panels – 270 series

### SIMATIC OP 270

#### Function (continued)

##### Configuration

Configuring is performed using the configuring software SIMATIC ProTool or SIMATIC ProTool/Pro Configuration (see HMI software/configuring software or visualization software) or using the engineering software SIMATIC WinCC flexible Standard or Advanced (see HMI software/SIMATIC WinCC flexible engineering software).

Projects generated using ProTool can be imported into WinCC flexible.

##### Applications/options

##### When configuring with ProTool

- SIMATIC ProAgent/MP;  
fast, localized fault diagnosis in plants and machines for SIMATIC S7 and SIMATIC HMI (see HMI software/process diagnostics software SIMATIC ProAgent)

##### When configuring with WinCC flexible

- WinCC flexible /ProAgent;  
fast, localized fault diagnosis in plants and machines for SIMATIC S7 and SIMATIC HMI (see HMI software/process diagnostics software SIMATIC ProAgent)
- WinCC flexible /Sm@rtAccess;  
Remote control and monitoring as well as communication between different SIMATIC HMI systems (see WinCC flexible RT options)
- WinCC flexible /Sm@rtService;  
Remote monitoring and service of machines/plants over the Internet/Intranet (see WinCC flexible RT options)

#### Integration

The SIMATIC OP 270 Operator Panels can be connected to:

- SIMATIC S7-200/-300/-400
- SIMATIC WinAC Software/Slot PLC
- SIMATIC S5
- SIMATIC 505
- SINUMERIK
- SIMOTION
- Non-Siemens PLCs
  - Allen Bradley
  - Mitsubishi
  - Telemecanique <sup>1)</sup>
  - LG GLOFA GM
  - Modicon
  - GE-Fanuc
  - Omron
- Over Ethernet (TCP/IP) to higher-level PC and network printer (optionally over NE2000-compatible network card)

##### Additionally when configuring with WinCC flexible

- Ethernet communication with SIMATIC S7 (optionally over NE2000-compatible network card)
- Multi-protocol capability
- HTTP communication to other SIMATIC HMI systems (optionally with the "WinCC flexible /Sm@rtAccess" option)
- SINUMERIK (optionally with "SINUMERIK HMI copy license WinCC flexible CE"; the "SINUMERIK HMI engineering package WinCC flexible" is additionally necessary for configuration; for further information, see Catalog NC 60)

1) Cannot be connected in conjunction with WinCC flexible



Note:  
For further information, see "System interfaces".

# Operator Control and Monitoring Devices

## Panels – 270 series

### SIMATIC OP 270

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#### Technical specifications

	<b>SIMATIC OP 270 5,7" Color STN Display</b>	<b>SIMATIC OP 270 10,4" Color STN Display</b>
<b>Display</b>		
• Display type	STN liquid crystal display (LCD)	STN liquid crystal display (LCD)
• Size	5.7"	10.4"
• Resolution (W x H in pixels)	320 x 240	640 x 480
• Colors	256 colors	256 colors
• MTBF of background lighting (at 25 °C)	approx. 40,000 hours	approx. 60,000 hours
<b>Operating mode</b>		
• Control elements	Membrane keyboard	Membrane keyboard
• Operating options	Key	Key
• Function keys, programmable	24 function keys, 18 with LEDs	36 function keys, 28 with LEDs
• Membrane keyboard	Yes	Yes
• System keys	36	38
• Numeric/alphanumeric input	Yes/Yes	Yes/Yes
• External mouse/keyboard/bar-code reader	USB/USB/USB	USB/USB/USB
<b>Processor/HW</b>	RISC 32 bits, 180 MHz	RISC 32 bits, 180 MHz
<b>Operating systems</b>	Windows CE	Windows CE
<b>Memory</b>		
• Type	Flash/RAM	Flash/RAM
• Usable memory for project data	2028 KB user memory/without additional memory for options	2028 KB user memory/without additional memory for options
<b>Interfaces (some only as options)</b>		
• Interfaces	2 x RS232, 1 x RS422, 1 x RS485 max. 12 Mbit/s	2 x RS232, 1 x RS422, 1 x RS485 max. 12 Mbit/s
• CF card slot	1 x CF card slot	1 x CF card slot
• USB (universal serial bus)	1 x USB	1 x USB
<b>Supply voltage</b>		
• Supply voltage	24 V DC	24 V DC
• Permissible range	+18 to +30 V DC	+18 to +30 V DC
• Rated current	0.6 A	0.6 A
• Output	15 W	15 W
• UPS can be connected (serial)	Yes	Yes
• Backup battery	Optional 3.6 V	Optional 3.6 V
<b>Clock</b>	Hardware clock, battery-backed and synchronized	Hardware clock, battery-backed and synchronized

	<b>SIMATIC OP 270 5,7" Color STN Display</b>	<b>SIMATIC OP 270 10,4" Color STN Display</b>
<b>Degree of protection</b>		
• Front	IP65, NEMA 4, NEMA 4x, NEMA 12; (when mounted)	IP65, NEMA 4, NEMA 4x, NEMA 12; (when mounted)
• Rear	IP20	IP20
<b>Certification (some only as options)</b>	CE, GL, ABS, DNV, LRS, FM Class I Div. 2, UL, cULus, EX zone 2/22, C-TICK	CE, GL, ABS, DNV, LRS, FM Class I Div. 2, UL, cULus, EX zone 2/22, C-TICK
<b>Mechanical components/ dimensions</b>		
• Front panel W x H (mm)	308 x 204	483 x 310
• Mounting cutout/depth W x H x D (mm)	282 x 178/ 59 mm depth of unit	436 x 295/ 55 mm depth of unit
• Weight	1 kg	6 kg
<b>Ambient conditions</b>		
• Max. relative humidity (in %)	90%	90%
• Mounting position	Vertical	Vertical
- Max. permissible angle of inclination without external fan	+/- 35°	+/- 35°
• Temperature		
- Operation (vertical installation)	0 to +50 °C	0 to +50 °C
- Operation (max. angle of inclination)	0 to +35 °C	0 to +35 °C
- Transportation and storage	-20 to +60 °C	-20 to +60 °C
<b>Expansions for operator-process communication (may only be an option)</b>		
• DP direct LEDs (LEDs as S7 output I/O)	F1...F8, K1...K10	F1...F12, K1...K16
• DP direct keys (buttons as input peripherals)	F1...F14, K1...K104 byte or coded	F1...F20, K1...K165 byte or coded
<b>Peripherals/applications/options</b>		
• I/O	Printer, bar-code reader	Printer, bar-code reader
• Applications/options (with ProTool)	ProAgent	ProAgent
<b>Configuring</b>		
• Configuration tool	ProTool	ProTool
• Configuration tool	WinCC flexible	WinCC flexible

# Operator Control and Monitoring Devices

## Panels – 270 series

### SIMATIC OP 270

#### Technical specifications (continued)

	<b>SIMATIC OP 270 5,7" Color STN Display</b>	<b>SIMATIC OP 270 10,4" Color STN Display</b>
<b>Functionality (with WinCC flexible)</b>		
• Scheduler	Yes	Yes
• Help system	Yes	Yes
• Status/Control	with SIMATIC S5/S7	with SIMATIC S5/S7
<b>Protocols</b>		
• Interface to control (may only be an option)	S5, S7-200, S7-300/400, 505Win AC, PC (TCP/IP), SINUMERIK, SIMOTION, Allen Bradley (DF1), Allen Bradley (DF485), Mitsubishi (FX), Telemecanique (ADJUST), OMRON (LINK/Multi- link), Modicon (Modbus) and other non-Siemens drivers	S5, S7-200, S7-300/400, 505Win AC, PC (TCP/IP), SINUMERIK, SIMOTION, Allen Bradley (DF1), Allen Bradley (DF485), Mitsubishi (FX), Telemecanique (ADJUST), OMRON (LINK/Multi- link), Modicon (Modbus) and other non-Siemens drivers
<b>Signaling system</b>		
• Number of messages	4000	4000
• Discrete alarms	Yes	Yes
• Analog messages	Yes	Yes
• Message length (in characters)	70	70
• Number of process values per message	8	8
• Message buffer	Ring buffer, 512 entries each	Ring buffer, 512 entries each
<b>Recipes</b>		
• Recipes	300	300
• Data records per recipe	500	500
• Entries/data record	1000	1000
• Recipe memory	64 KB inte- grated Flash, expandable	64 KB inte- grated Flash, expandable
<b>Process images</b>	300	300
<b>Picture elements</b>		
• Text objects	10,000 text ele- ments	10,000 text ele- ments
• Fields per screen	200	200
• Variables/screen	200	200
• Graphics objects	Bitmaps, icons, vector graphics	Bitmaps, icons, vector graphics
• Dynamic objects	Diagrams, bar graphs, hidden buttons	Diagrams, bar graphs, hidden buttons
<b>Variables</b>	2048	2048

	<b>SIMATIC OP 270 5,7" Color STN Display</b>	<b>SIMATIC OP 270 10,4" Color STN Display</b>
<b>Archiving</b>		
• Number of archives per project	20	20
• Number of process tags per ar- chive	0	0
• Number of entries per archive	10,000	10,000
• Archive types	Sequence archive, short- term archive, alarm log, pro- cess value archive	Sequence archive, short- term archive, alarm log, pro- cess value archive
• Memory location	CF card, Ether- net	CF card, Ether- net
• Data storage format	CSV file, can be read, e.g., in MS Excel, MS Access	CSV file, can be read, e.g., in MS Excel, MS Access
• External evaluation	Can be read, e.g., in MS Excel, MS Access, etc.	Can be read, e.g., in MS Excel, MS Access, etc.
• Size of archive	Dependent on the memory space avail- able on the external card/stick or spare hard disk memory via the network drive	Dependent on the memory space avail- able on the external card/stick or spare hard disk memory via the network drive
• Online evaluation	Using trend curves	Using trend curves
<b>Security</b>		
• Number of user groups	10	10
• Exportable passwords	Yes	Yes
<b>Visual Basic script</b>	Not possible	Not possible
<b>Logging/printer driver</b>		
• Printing/logging	Messages, report/log, color print	Messages, report/log, color print
• Printer driver	ESC/P2, PCL3/PCL6	ESC/P2, PCL3/PCL6
<b>Fonts</b>		
• Keyboard fonts	US English	US English
<b>Languages</b>		
• Online languages	5	5
• Project languages:	D, GB, F, I, E, CHN "tradi- tional", CHN "simplified", DK, FIN, GR, J, KP/ROK, NL, N, PL, P, RUS, S, CZ/SK, TR, H	D, GB, F, I, E, CHN "tradi- tional", CHN "simplified", DK, FIN, GR, J, KP/ROK, NL, N, PL, P, RUS, S, CZ/SK, TR, H
• Character sets	Tahoma, ideographic languages, 2 further char- acter sets can be loaded, all freely scalable	Tahoma, ideographic languages, 2 further char- acter sets can be loaded, all freely scalable
<b>Data carrier support (may only be an option)</b>		
• CF card	Yes	Yes
• Applications/options (with WinCC flexible)	ProAgent	ProAgent

# Operator Control and Monitoring Devices

## Panels – 270 series

SIMATIC OP 270

### Technical specifications (continued)

	SIMATIC OP 270 5,7" Color STN Display	SIMATIC OP 270 10,4" Color STN Display
<b>Transfer under ProTool (upload/download)</b>		
• Transfer of the configuration	MPI/PROFIBUS DP, serial, USB, Ethernet (auto- matic transfer recognition)	MPI/PROFIBUS DP, serial, USB, Ethernet (auto- matic transfer recognition)
<b>Functionality (under ProTool)</b>		
• Timer	Yes	Yes
• Password protection (number of levels)	9	9
• Help system	Yes	Yes
• PG functions (STATUS/CONTROL)	with SIMATIC S5/S7	with SIMATIC S5/S7
• PG function (status/control)	Yes	Yes
<b>Protocols</b>		
• Interface to PLC (may only be an option)	S5, S7-200, S7-300/400, 505Win AC, SINUMERIK, SIMOTION, Allen Bradley (DF1), Allen Bradley (DF485), Mitsubishi (FX), Telemecanique (ADJUST), OMRON (LINK/Multi- link), Modicon (Modbus) and other non-Siemens drivers	S5, S7-200, S7-300/400, 505Win AC, SINUMERIK, SIMOTION, Allen Bradley (DF1), Allen Bradley (DF485), Mitsubishi (FX), Telemecanique (ADJUST), OMRON (LINK/Multi- link), Modicon (Modbus) and other non-Siemens drivers
<b>Signaling system</b>		
• Status messages	2000	2000
• Alarm messages	2000	2000
• System messages	Yes	Yes
• Message length (lines x characters)	1 x 70	1 x 70
• Number of process values in messages	8	8
• Message buffer	Ring buffer, 512 entries each	Ring buffer, 512 entries each
<b>Recipes</b>		
• Recipes	300	300
• Data records per recipe	500	500
• Entries/data record	1000	1000
• Recipe memory	64 KB inte- grated Flash, expandable	64 KB inte- grated Flash, expandable
Process images	300	300
Picture elements		
• Text objects	10,000 text elements	10,000 text elements
• Fields per screen	200	200
• Variables per screen	200	200
• Graphics objects	Bitmaps, icons, vector graphics	Bitmaps, icons, vector graphics
• Dynamic objects	Diagrams, bar graphs, slides, analog dis- plays, hidden buttons	Diagrams, bar graphs, slides, analog dis- plays, hidden buttons

	SIMATIC OP 270 5,7" Color STN Display	SIMATIC OP 270 10,4" Color STN Display
Variables	2048	2048
<b>Archiving</b>		
• Number of archives per project	20	20
• Number of process tags per ar- chive	20	20
• Number of entries per archive	500,000	500,000
• Archive types	Short-term archive, sequence archive, mes- sage archive, process-value archive	Short-term archive, sequence archive, mes- sage archive, process-value archive
• Memory location	Number of entries per archive, sequence archive	Number of entries per archive, sequence archive
• Data storage format	CSV file, can be read, e.g., in MS Excel, MS Access	CSV file, can be read, e.g., in MS Excel, MS Access
• External evaluation	Can be read, e.g., in MS Excel, MS Access, etc.	Can be read, e.g., in MS Excel, MS Access, etc.
• Size of archive	Dependent on the memory space avail- able on the external card/stick or spare hard disk memory via the network drive	Dependent on the memory space avail- able on the external card/stick or spare hard disk memory via the network drive
• Online evaluation	Using trend curves	Using trend curves
Visual Basic Script	Anzahl = 50 / Anzahl Zeilen pro Script = 20	Anzahl = 50 / Anzahl Zeilen pro Script = 20
<b>Logging/printer driver</b>		
• Print functions	Messages, shift log, color print, hardcopy	Messages, shift log, color print, hardcopy
• Drivers	ESC/P2, PCL3/PCL6	ESC/P2, PCL3/PCL6
<b>Fonts</b>		
• Language (keyboard fonts)	US English	US English
<b>Languages</b>		
• Online languages	5	5
• Project languages	D, GB, F, I, E, CHN "tradi- tional", CHN "simplified", DK, FIN, GR, J, KP/ROK, NL, N, PL, P, RUS, S, CZ/SK, TR, H Tahoma, Arial, Courier New, ideographic languages, 2 further charac- ter sets can be loaded, all freely scalable	D, GB, F, I, E, CHN "tradi- tional", CHN "simplified", DK, FIN, GR, J, KP/ROK, NL, N, PL, P, RUS, S, CZ/SK, TR, H Tahoma, Arial, Courier New, ideographic languages, 2 further charac- ter sets can be loaded, all freely scalable
• Character set		
Data carrier support		
• CF card	Yes	Yes

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# Operator Control and Monitoring Devices

## Panels – 270 series

### SIMATIC OP 270

Ordering data	Order No.
<b>SIMATIC OP 270</b> Operator Panel with	
• 5.7" color STN display	B <b>6AV6 542-0CA10-0AX0</b>
• 10.4" color STN display incl. mounting accessories	B <b>6AV6 542-0CC10-0AX0</b>
<b>Configuring</b>	
with SIMATIC ProTool or ProTool/Pro	See Section 4
with SIMATIC WinCC flexible	See Section 4
<b>Configuration set</b>	D <b>6AV6 622-0BA01-0AA0</b>
Consisting of:	
• WinCC flexible Standard engineering software	
• SIMATIC HMI Manual Collection (CD), 5 languages (English, French, German, Italian, Spanish)	
• Configuration cable USB master-master between PG/PC and panel	
• MPI cable, 5 m	
<b>Applications/options</b>	
<b>When configuring with ProTool</b>	
• SIMATIC ProAgent/MP	See Section 4
<b>When configuring with WinCC flexible</b>	
• WinCC flexible /ProAgent	See Section 4
• WinCC flexible /Sm@rtAccess	See Section 4
• WinCC flexible/Sm@rtService	See Section 4
<b>Documentation (to be ordered separately)</b>	
<b>Operating Instructions TP 270/OP 270 and MP 270B (WinCC flexible)</b>	
• German	<b>6AV6 691-1DD01-0AA0</b>
• English	<b>6AV6 691-1DD01-0AB0</b>
• French	<b>6AV6 691-1DD01-0AC0</b>
• Italian	<b>6AV6 691-1DD01-0AD0</b>
• Spanish	<b>6AV6 691-1DD01-0AE0</b>
<b>User Manual WinCC flexible Compact/Standard/Advanced</b>	
• German	<b>6AV6 691-1AB01-0AA0</b>
• English	<b>6AV6 691-1AB01-0AB0</b>
• French	<b>6AV6 691-1AB01-0AC0</b>
• Italian	<b>6AV6 691-1AB01-0AD0</b>
• Spanish	<b>6AV6 691-1AB01-0AE0</b>
<b>User Manual WinCC flexible Communication</b>	
• German	<b>6AV6 691-1CA01-0AA0</b>
• English	<b>6AV6 691-1CA01-0AB0</b>
<b>TP/OP 270 and MP 270B (ProTool) Manual</b>	
• German	<b>6AV6 591-1DC20-0AA0</b>
• English	<b>6AV6 591-1DC20-0AB0</b>
• French	<b>6AV6 591-1DC20-0AC0</b>
• Italian	<b>6AV6 591-1DC20-0AD0</b>
• Spanish	<b>6AV6 591-1DC20-0AE0</b>

A) Subject to export regulations AL: N and ECCN: EAR99H

B) Subject to export regulations AL: N and ECCN: 5D002ENC3

Ordering data	Order No.
<b>ProTool User Manual for config- uring Windows-based systems</b>	
• German	<b>6AV6 594-1MA06-1AA0</b>
• English	<b>6AV6 594-1MA06-1AB0</b>
• French	<b>6AV6 594-1MA06-1AC0</b>
• Italian	<b>6AV6 594-1MA06-1AD0</b>
• Spanish	<b>6AV6 594-1MA06-1AE0</b>
<b>Communication User Manual for Windows-based systems (ProTool)</b>	
• German	<b>6AV6 596-1MA06-0AA0</b>
• English	<b>6AV6 596-1MA06-0AB0</b>
• French	<b>6AV6 596-1MA06-0AC0</b>
• Italian	<b>6AV6 596-1MA06-0AD0</b>
• Spanish	<b>6AV6 596-1MA06-0AE0</b>
<b>SIMATIC HMI Manual Collection</b>	C <b>6AV6 691-1SA01-0AX0</b>
Electronic documentation, on CD-ROM	
5 languages (English, French, German, Italian and Spanish); contains: all currently available user manuals, manuals and communication manuals for SIMATIC HMI	
<b>Accessories</b>	
<b>CF cards</b>	
CF card, 128 MB	A <b>6AV6 574-2AC00-2AA0</b>
<b>Backup battery</b>	<b>W79084-E1001-B2</b>
Lithium battery, DC 3.6 V; 1.7 Ah for TD17, OP17, OP25, OP27, OP 270, OP35, OP37, TP27, TP 270, TP37, MP 270, MP 270B, MP 370	
<b>Accessories for supplementary ordering</b>	
<b>Service package for OP 270 6"</b>	<b>6AV6 574-1AA00-4AX0</b>
Consisting of:	
• Installation sealing	
• 2 sets of labeling strips	
• 7 tensioning clamps	
• Plug-in terminal block (twin block)	
<b>Service package for OP 270 10"</b>	<b>6AV6 574-1AA00-2DX0</b>
Consisting of:	
• Installation sealing	
• 2 sets of labeling strips	
• 10 tensioning clamps	
• Plug-in terminal block (twin block)	
• Socket wrench	
<b>Bus connector RS 485 with axial cable outlet (180°)</b>	<b>6GK1 500-0EA02</b>
<b>TTY-RS 232 converter</b>	<b>6ES5 734-1BD20</b>
for connection with S5 CPUs, length 3.2 m; Canon 15-pin – 25-pin	
<b>RS 232 cable (5 m)</b>	<b>6ES7 901-1BF00-0XA0</b>
<b>System interfaces</b>	See page 2/169
<b>Connecting cables</b>	See page 2/180

C) Subject to export regulations AL: N and ECCN: EAR99S

D) Subject to export regulations AL: N and ECCN: 5D992B1

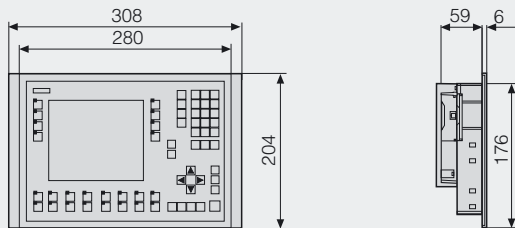
# Operator Control and Monitoring Devices

## Panels – 270 series

SIMATIC OP 270

### Dimension drawings

Dimensions in mm

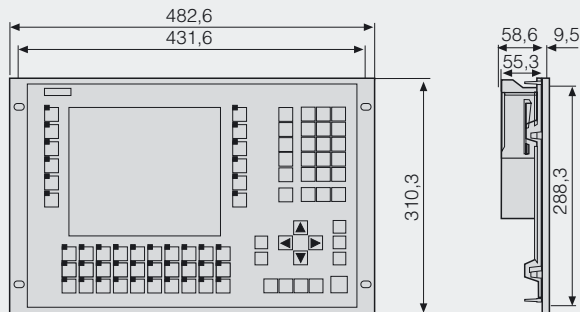


Panel cutout (B x H) in mm: 282 x 178

G\_ST80\_XX\_00056

OP 270 6"

Dimensions in mm



Panel cutout (B x H) in mm: 436 x 295

G\_ST80\_XX\_00055

OP 270 10"

### More information

For further information, visit our website at


<http://www.siemens.com/panels>


#### Note

Do you need a specific modification or option for the products described here? Then look up "Customized products", where you will find information about additional sector-specific products that can be ordered as well as about options for customer-specific modification and adaptation.